

A schematic diagram of a rod assembly. A central rod is shown with a hatched section in the middle and unshaded sections at the ends. Two lenses, labeled 92 and 91, are positioned on the rod. A vertical dashed line, labeled 101, is located between the two lenses. Various length parameters are indicated with arrows:  $L_{rod}$  is the total length of the rod;  $L_{end}$  is the length of the unshaded end sections;  $L_{pump}$  is the length of the hatched section;  $L_{tl}$  is the distance from lens 91 to the right end of the rod;  $L_{tp}$  is the distance from lens 92 to the right end of the rod;  $L_{rod}/2$  is the distance from the center of the rod (indicated by a vertical dashed line) to the right end; and  $B$  is the right end of the rod. The entire assembly is labeled 102.

The diagram illustrates a rod pump assembly with the following components and dimensions:

- Components:**
  - 3:** Wellhead or surface connection on the left.
  - 1:** The main rod pump body.
  - 92:** A component, likely a seal or check valve, located near the left end of the rod.
  - 101:** A vertical dashed line representing the centerline of the pump.
  - 91:** A component, likely a seal or check valve, located near the right end of the rod.
  - A:** A point on the rod, located between the seal 91 and the end B.
  - B:** The right end of the rod pump assembly.
- Dimensions:**
  - $L_m$ : The distance from the wellhead (3) to the left end of the rod pump (1), and from the right end of the rod pump (B) to the wellhead on the right.
  - $L_{rod}/2$ : The distance from the centerline (101) to the right end (B).
  - $L_{tl}$ : The distance from the seal 91 to the right end (B).
  - $L_{end}$ : The distance from the left end of the rod pump (1) to the seal 92, and from the seal 91 to the right end (B).
  - $L_{pump}$ : The total length of the rod pump assembly (1).
  - $L_{rod}$ : The total length of the rod.

Diagram illustrating a three-terminal system. A central node (1) is connected to two outer nodes (2 and 3) via links. The links are labeled with the expression  $Ltl/n + Lm$ . A dashed oval encloses the central node and the links, indicating a central processing or storage unit.

Figure 1 is a schematic diagram of a light beam in a fiber-optic cable. A light beam 42 is launched from a source 3 into a fiber 2. The beam is focused by a lens 93 at a distance  $L_{tl}/n + L_m$  from the source. The beam diameter is  $d$ . The beam is then focused by a lens 43 at a distance  $L_{tl}/n + L_m$  from the fiber. The beam diameter is  $d'$ . The fiber length is  $L_m$ .

Fig.8

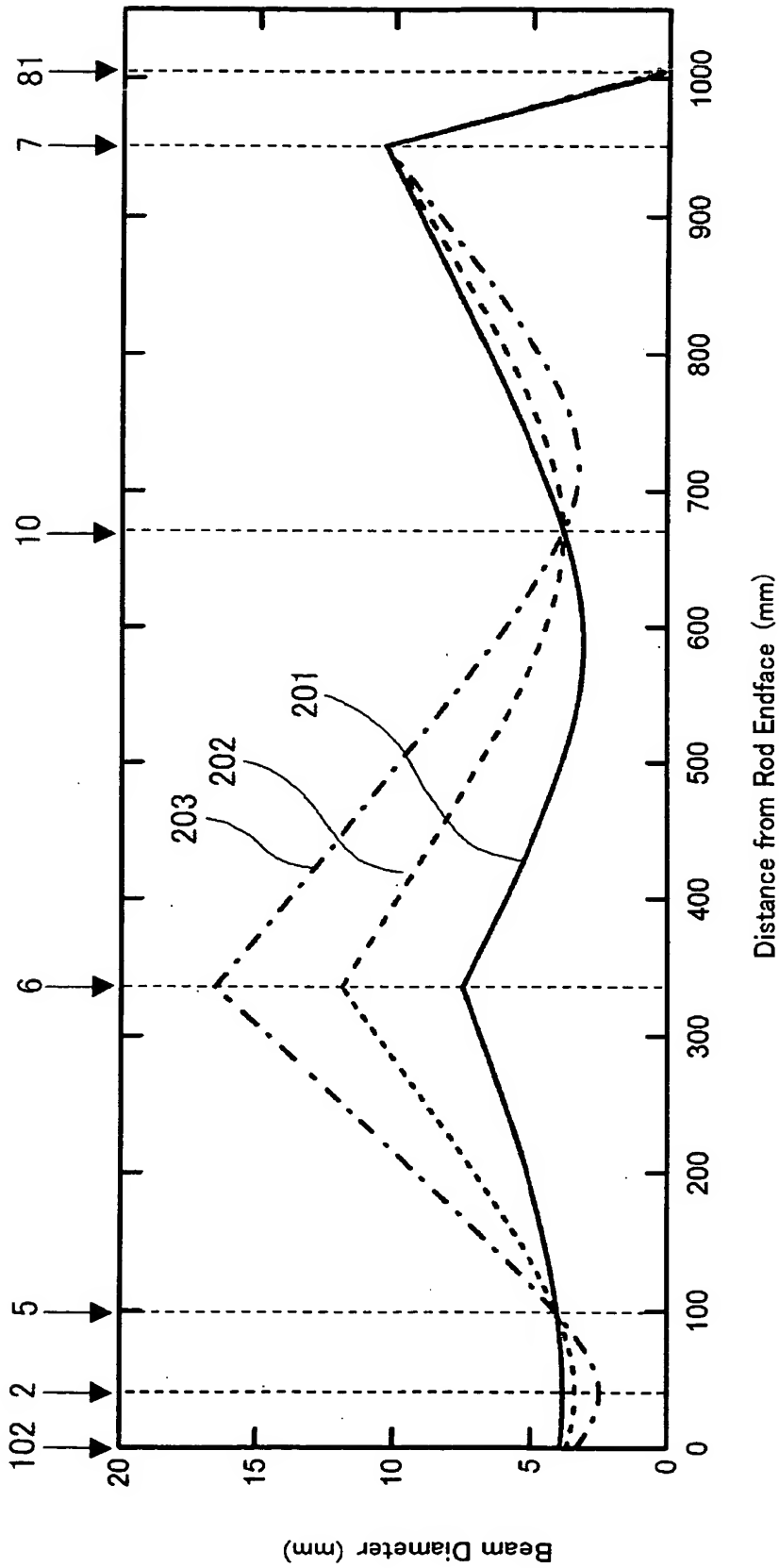


Fig.9

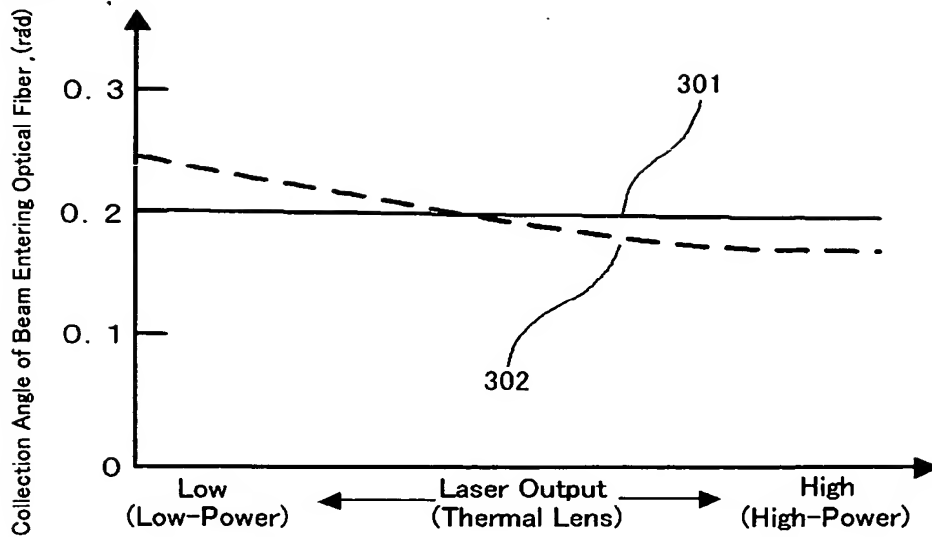


Fig.10

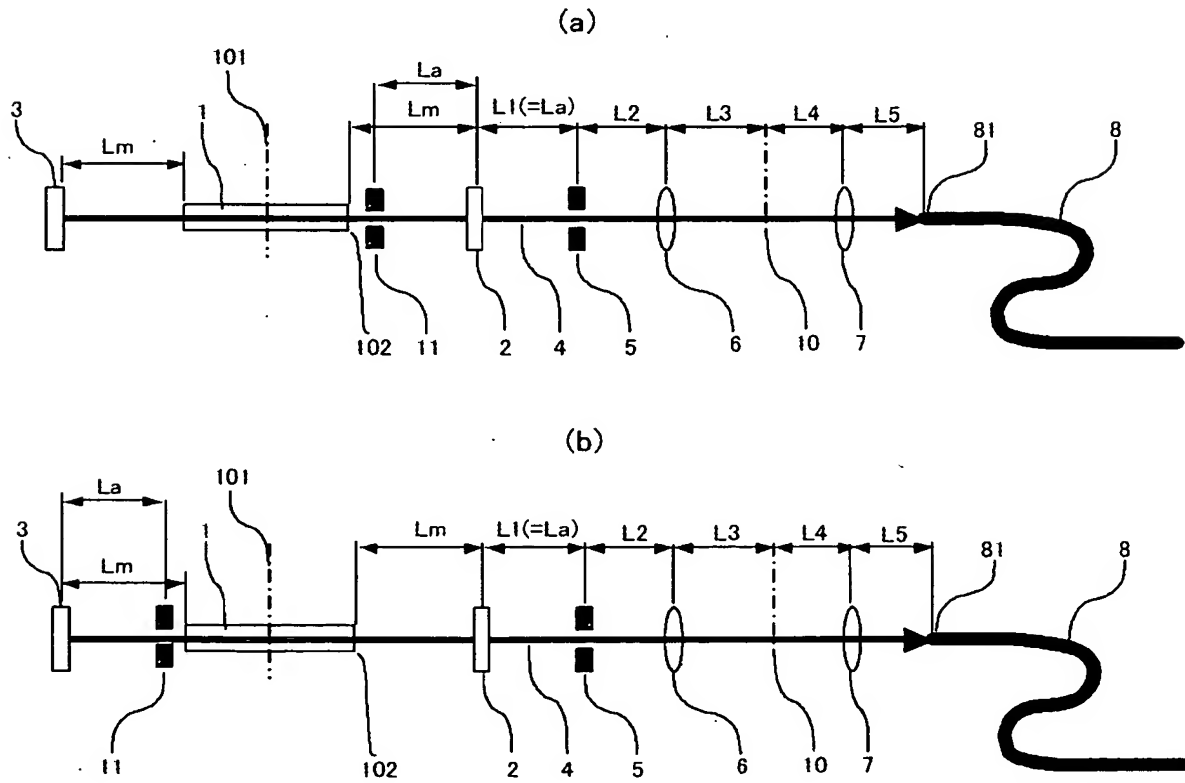


Fig.11

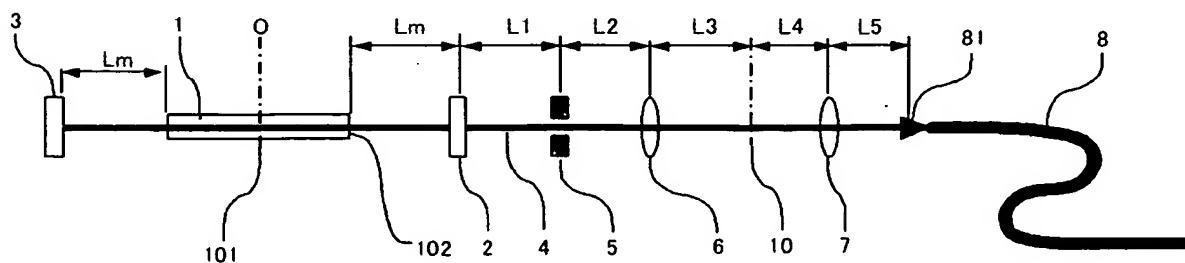
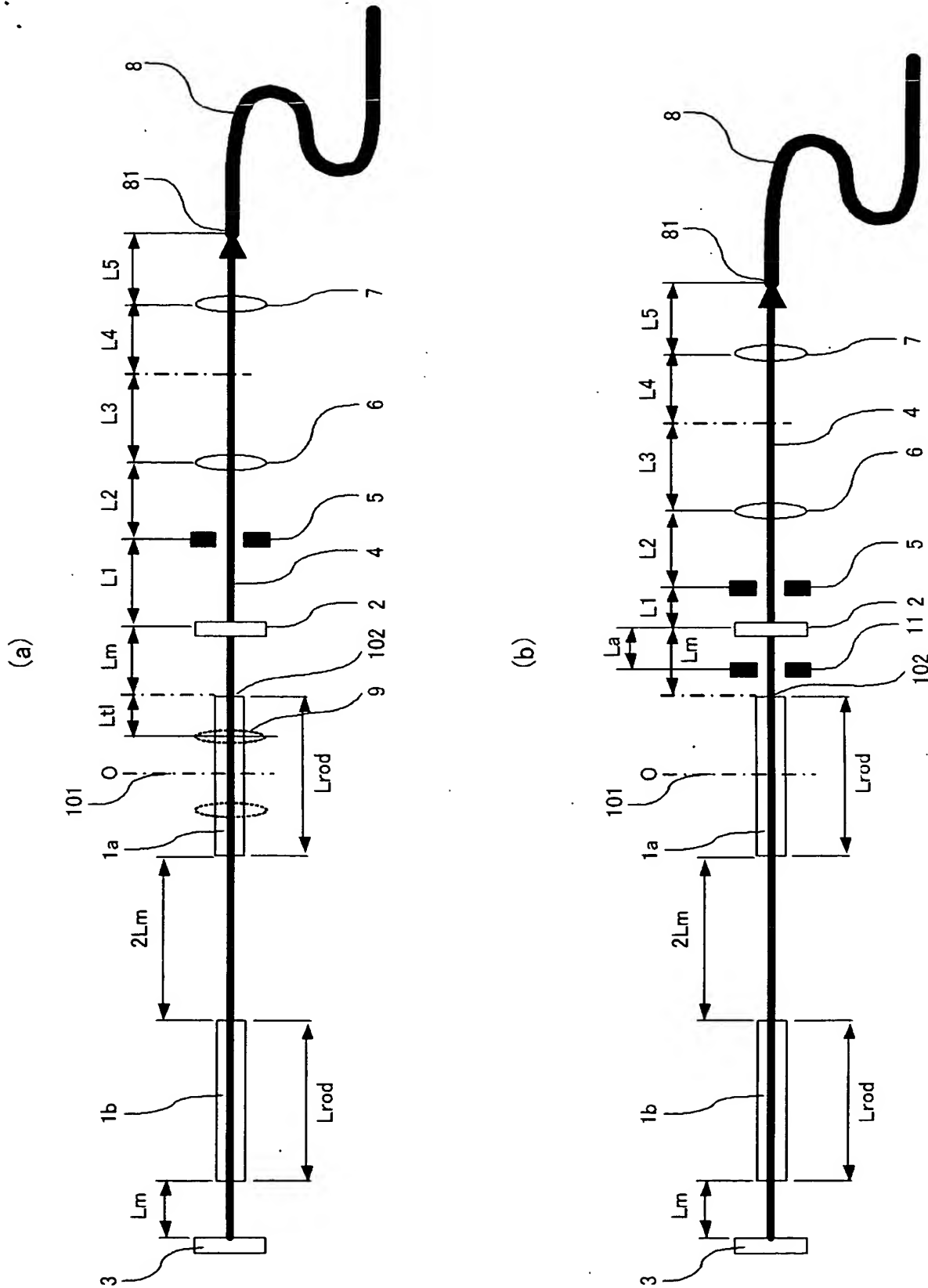


Fig.12





**Fig.14**

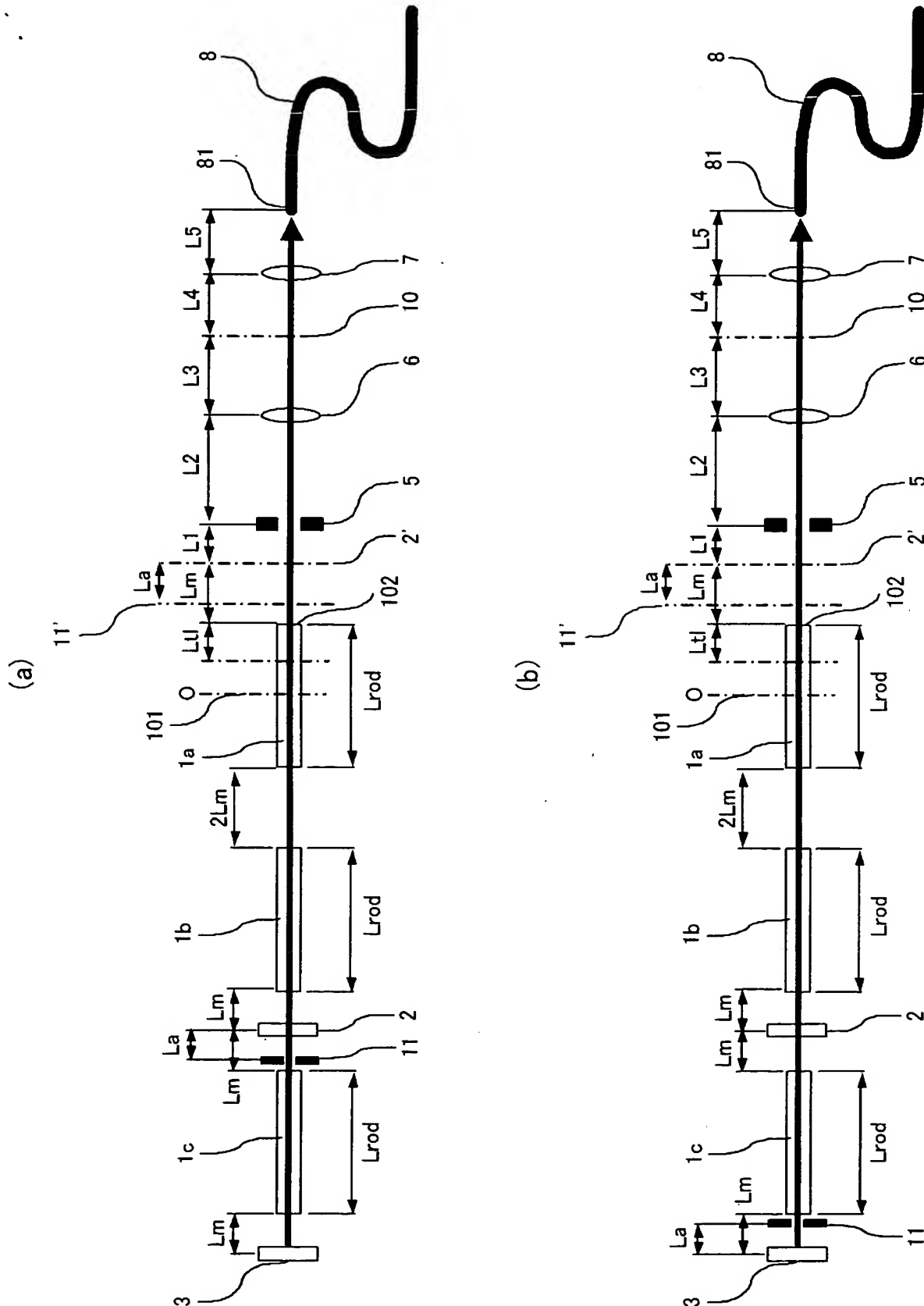


Fig.15

